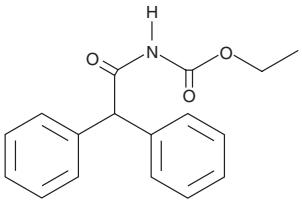
PRODUCT INFORMATION

Ro 01-6128

Item No. 11991

CAS Registry No.:	302841-86-7
Formal Name:	N-(2,2-diphenylacetyl)-carbamic acid, ethyl ester
MF:	$C_{17}H_{17}NO_3$
FW:	283.3
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ro 01-6128 is supplied as a crystalline solid. A stock solution may be made by dissolving the Ro 01-6128 in the solvent of choice, which should be purged with an inert gas. Ro 01-6128 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Ro 01-6128 in ethanol and DMSO is approximately 20 mg/ml and approximately 11 mg/ml in DMF.

Ro 01-6128 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Ro 01-6128 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ro 01-6128 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Glutamate, the major excitatory neurotransmitter in the CNS, activates eight known subtypes of metabotropic glutamate receptors (mGluRs). Highly selective modulators designed to act at allosteric sites on certain mGluR subtypes are being developed to preferentially regulate subtype-specific, glutamate-induced receptor activation.[1] Ro 01-6128 is a positive allosteric modulator of mGluR1 that can potentiate glutamate-induced calcium release at rat mGluR1a with an EC_{50} value of 104 nM.[2,3] Ro 01-6128 activates ERK1/2 phosphorylation in the absence of exogenously added glutamate with an EC_{50} value of 248 nM and potentiates glutamate-induced cAMP production with an EC_{50} value of 21.5 µM.[1]

References

1. Sheffler, D.J. and Conn, P.J. Allosteric potentiators of metabotropic glutamate receptor subtype 1a differentially modulate independent signaling pathways in baby hamster kidney cells. *Neuropharmacology* **55(4)**, 419-427 (2008).
2. Knoflach, F., Mutel, V., Jolidon, S., *et al*. Positive allosteric modulators of metabotropic glutamate 1 receptor: Characterization, mechanism of action, and binding site. *Proc. Natl. Acad. Sci. USA* **98(23)**, 13402-13407 (2001).
3. Hemstapat, K., de Paulis, T., Chen, Y., *et al*. A novel class of positive allosteric modulators of metabotropic glutamate receptor subtype 1 interact with a site distinct from that of negative allosteric modulators. *Mol. Pharmacol*. **70(2)**, 616-626 (2006).

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